



SEQUENCE LISTING

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RECEIVED

TECH CENTER 1600 2900

<120> MAMMALIAN CYTOKINES; RELATED REAGENTS AND METHODS

<130> DX0903K1

<140> US 09/963,347

<141> 2001-09-25

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<151> 1999-09-20

<150> US 60/131,298

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<150> US 60/101,318

<151> 1998-09-21

<160> 9

<170> PatentIn version 3.1

<210> 1

<211> 468

<212> DNA

<213> Homo sapiens

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<221> CDS

<222> (20)..(466)

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<221> mat_peptide

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<223> unknown amino

cta tat gtt ctg tca ggt tct ttc agg aaa atc ttc atc tta cca cct
Leu Tyr Val Leu Ser Val Ser Phe Arg Lys Ile Phe Ile Leu Gln Leu

-15

-16

-5	-1	1	5	10	
att aaa gca gcc tat ctc agt act att tct aaa gac ctg att aca tat					196
Ile Lys Ala Ala Tyr Leu Ser Thr Ile Ser Lys Asp Leu Ile Thr Tyr	15		20	25	
atg agt ggg acc aaa agt acc gag ttc aac aac acc gtc tct tgt agc					244
Met Ser Gly Thr Lys Ser Thr Glu Phe Asn Asn Thr Val Ser Cys Ser	30		35	40	
aat cgg cca cat tgc ctt act gaa atc cag agc cta acc ttc aat ccc					292
Asn Arg Pro His Cys Leu Thr Glu Ile Gln Ser Leu Thr Phe Asn Pro	45		50	55	
aac cgc cgn gtq cqq tcg ctc gcc aaa gaa atg ttc gcc atg aaa act					340
Asn Arg Arg Val Arg Ser Leu Ala Lys Glu Met Phe Ala Met Lys Thr	60		65	70	
aag gct gcc tta gct atc tgg tgc cca ggc tat tcg gaa act cag ata					388
Lys Ala Ala Leu Ala Ile Trp Cys Pro Gly Tyr Ser Glu Thr Gln Ile	75	80	85	90	
aat gct act cag gca atg aag aag agg aga aaa agg aaa gtc aca acc					436
Asn Ala Thr Gln Ala Met Lys Lys Arg Arg Lys Arg Lys Val Thr Thr	95		100	105	
aat aaa tgt ctg gaa caa gtg tca caa tta aa					468
Asn Lys Cys Leu Glu Gln Val Ser Gln Leu	110		115		

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 <212> PRT
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<220>
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<400> 2

Met Gly Cys Pro Arg Met Phe Pro Phe Ala Leu Leu Tyr Val Leu Ser			
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Val Ser Phe Arg Lys Ile Phe Ile Leu Gln Leu Val Gly Leu Val Leu			
-15	-10	-5	

Leu Ser Thr Ile Ser Lys Arg Leu Ile Thr Tyr Met Ser Gly Ile Lys			
20	25	30	

Leu Thr Glu Ile Gln Ser Leu Thr Phe Asn Pro Asn Arg Arg Val Arg
 50 55 60

Ser Leu Ala Lys Glu Met Phe Ala Met Lys Thr Lys Ala Ala Leu Ala
 65 70 75

Ile Trp Cys Pro Gly Tyr Ser Glu Thr Gln Ile Asn Ala Thr Gln Ala
 80 85 90 95

Met Lys Lys Arg Arg Lys Arg Lys Val Thr Thr Asn Lys Cys Leu Glu
 100 105 110

Gln Val Ser Gln Leu
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 Met Phe Pro Phe Ala Leu Leu Tyr Val Leu Ser Val Ser Phe Arg Lys
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atc ttc atc tta caa ctt gta ggg ctg gtg tta act tac gac ttc act 96
 Ile Phe Ile Leu Gln Leu Val Gly Leu Val Leu Thr Tyr Asp Phe Thr
 -10 -5 -1 1

aac tgt gac ttt gag aag att aaa gca gcc tat ctc agt act att tct 144
 Asn Cys Asp Phe Glu Lys Ile Lys Ala Ala Tyr Leu Ser Thr Ile Ser
 15 20

aac acc gtc tct tgt agc aat cgg cca cat tgc ctt act gaa atc cag 240
 Asn Thr Val Ser Cys Ser Asn Arg Pro His Cys Leu Thr Glu Ile Gln
 245

Ser	Leu	Thr	Phe	Asn	Pro	Thr	Ala	Gly	Cys	Ala	Ser	Leu	Ala	Lys	Glu	
	55						60					65				
atg	ttc	gcc	atg	aaa	act	aag	gct	gcc	tta	gct	atc	tgg	tgc	cca	ggc	336
Met	Phe	Ala	Met	Lys	Thr	Lys	Ala	Ala	Leu	Ala	Ile	Trp	Cys	Pro	Gly	
	70					75					80					
tat	tcg	gaa	act	cag	ata	aat	gct	act	cag	gca	atg	aag	aag	agg	aga	384
Tyr	Ser	Glu	Thr	Gln	Ile	Asn	Ala	Thr	Gln	Ala	Met	Lys	Lys	Arg	Arg	
85					90				95						100	
aaa	agg	aaa	gtc	aca	acc	aat	aaa	tgt	ctg	gaa	caa	gtg	tca	caa	tta	432
Lys	Arg	Lys	Val	Thr	Thr	Asn	Lys	Cys	Leu	Glu	Gln	Val	Ser	Gln	Leu	
			105					110						115		
caa	gga	ttg	tgg	cgt	cgc	ttc	aat	cga	cct	tta	ctg	aaa	caa	cag	taa	480
Gln	Gly	Leu	Trp	Arg	Arg	Phe	Asn	Arg	Pro	Leu	Leu	Lys	Gln	Gln		
		120					125						130			

<210> 4
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 <212> PRT
 <213> Homo sapiens

<400> 4

Met	Phe	Pro	Phe	Ala	Leu	Leu	Tyr	Val	Leu	Ser	Val	Ser	Phe	Arg	Lys	
			-25					-20					-15			

Ile	Phe	Ile	Leu	Gln	Leu	Val	Gly	Leu	Val	Leu	Thr	Tyr	Asp	Phe	Thr	
	-10						-5				-1	1				

Asn	Cys	Asp	Phe	Glu	Lys	Ile	Lys	Ala	Ala	Tyr	Leu	Ser	Thr	Ile	Ser	
5					10					15					20	

Lys	Asp	Leu	Ile	Thr	Tyr	Met	Ser	Gly	Thr	Lys	Ser	Thr	Glu	Phe	Asn	
			25					30						35		

Asn	Thr	Val	Ser	Cys	Ser	Asn	Arg	Pro	His	Cys	Leu	Thr	Glu	Ile	Gln	
		40						45					50			

Ser	Leu	Thr	Phe	Asn	Pro	Thr	Ala	Gly	Cys	Ala	Ser	Leu	Ala	Lys	Glu	
	55						60					65				

Tyr	Ser	Gln	Thr	Gln	Ile	Asn	Ala	Ile	Gln	Ala	Met	Lys	Lys	Arg	Arg	
85					90					95					100	

Gln Gly Leu Trp Arg Arg Phe Asn Arg Pro Leu Leu Lys Gln Gln
120 125 130

<210> 5
<211> 176
<212> PRT
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Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Ile Pro Pro Leu Ile
1 5 10 15

Leu Val Leu Leu Pro Val Ala Ser Ser Asp Cys Asp Phe Ser Gly Lys
20 25 30

Asp Gly Gly Ala Tyr Gln Asn Val Leu Met Val Ser Ile Asp Asp Leu
35 40 45

Asp Asn Met Ile Asn Phe Asp Ser Asn Cys Leu Asn Asn Glu Pro Asn
50 55 60

Phe Phe Lys Lys His Ser Cys Asp Asp Asn Lys Glu Ala Ser Phe Leu
65 70 75 80

Asn Arg Ala Ala Arg Lys Leu Lys Gln Phe Leu Lys Met Asn Ile Ser
85 90 95

Asp Asp Phe Lys Leu His Leu Ser Thr Val Ser Gln Gly Thr Leu Thr
100 105 110

Leu Leu Asn Cys Thr Ser Lys Gly Lys Gly Arg Lys Pro Pro Ser Leu
115 120 125

Gly Glu Ala Gln Pro Thr Lys Asn Leu Glu Glu Asn Lys Ser Leu Lys
130 135 140

Glu Gln Arg Lys Gln Asn Asp Leu Cys Phe Leu Lys Ile Leu Leu Gln
145 150 155 160

<400> 6

Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Ile Pro Pro Leu Ile
1 5 10 15

Leu Val Leu Leu Pro Val Ala Ser Ser Asp Cys Asp Ile Ser Gly Lys
20 25 30

Asp Gly Gly Ala Tyr Gln Asn Val Leu Met Val Asn Ile Asp Asp Leu
35 40 45

Asp Asn Met Ile Asn Phe Asp Ser Asn Cys Leu Asn Asn Glu Pro Asn
50 55 60

Phe Phe Lys Lys His Ser Cys Asp Asp Asn Lys Glu Ala Ser Phe Leu
65 70 75 80

Asn Arg Ala Ser Arg Lys Leu Arg Gln Phe Leu Lys Met Asn Ile Ser
85 90 95

Asp Asp Phe Lys Leu His Leu Ser Thr Val Ser Gln Gly Thr Leu Thr
100 105 110

Leu Leu Asn Cys Thr Ser Lys Gly Lys Gly Arg Lys Pro Pro Ser Leu
115 120 125

Ser Glu Ala Gln Pro Thr Lys Asn Leu Glu Glu Asn Lys Ser Ser Lys
130 135 140

Glu Gln Lys Lys Gln Asn Asp Leu Cys Phe Leu Lys Ile Leu Leu Gln
145 150 155 160

Lys Ile Lys Thr Cys Trp Asn Lys Ile Leu Arg Gly Ile Lys Glu His
165 170 175

<210> 7

<211> 177

<212> PRT

Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Ile Pro Pro Leu Ile
1 5 10 15

Asp Gly Lys Gln Tyr Glu Ser Val Leu Met Val Ser Ile Asp Gln Leu
35 40 45

Leu Asp Ser Met Lys Glu Ile Gly Ser Asn Cys Leu Asn Asn Glu Phe
50 55 60

Asn Phe Phe Lys Arg His Ile Cys Asp Ala Asn Lys Glu Gly Met Phe
65 70 75 80

Leu Phe Arg Ala Ala Arg Lys Leu Arg Gln Phe Leu Lys Met Asn Ser
85 90 95

Thr Gly Asp Phe Asp Leu His Leu Leu Lys Val Ser Glu Gly Thr Thr
100 105 110

Ile Leu Leu Asn Cys Thr Gly Gln Val Lys Gly Arg Lys Pro Ala Ala
115 120 125

Leu Gly Glu Ala Gln Pro Thr Lys Ser Leu Glu Glu Asn Lys Ser Leu
130 135 140

Lys Glu Gln Lys Lys Leu Asn Asp Leu Cys Phe Leu Lys Arg Leu Leu
145 150 155 160

Gln Glu Ile Lys Thr Cys Trp Asn Lys Ile Leu Met Gly Thr Lys Glu
165 170 175

His

<210> 8
<211> 154
<212> PRT
<213> Mus musculus

<400> 8

Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Ile Pro Pro Leu Ile
5 10 15

Glu Gly Lys Ala Tyr Glu Ser Val Leu Met Ile Ser Ile Asp Glu Leu
25 30 35 40 45

Fig. 1. Amino acid sequence of the

50

55

60

Phe Phe Arg Lys His Val Cys Asp Asp Thr Lys Glu Ala Ala Phe Leu
65 70 75 80

Asn Arg Ala Ala Arg Lys Leu Lys Gln Phe Leu Lys Met Asn Ile Ser
85 90 95

Glu Glu Phe Asn Val His Leu Leu Thr Val Ser Gln Gly Thr Gln Thr
100 105 110

Leu Val Asn Cys Thr Ser Lys Glu Glu Lys Asn Val Lys Glu Gln Lys
115 120 125

Lys Asn Asp Ala Cys Phe Leu Lys Arg Leu Leu Arg Glu Ile Lys Thr
130 135 140

Cys Trp Asn Lys Ile Leu Lys Gly Ser Ile
145 150

<210> 9
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<212> PRT
<213> Mus musculus

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Met Phe His Val Ser Phe Arg Tyr Ile Phe Gly Ile Pro Pro Leu Ile
1 5 10 15

Leu Val Leu Leu Pro Val Thr Ser Ser Asp Cys His Ile Lys Asp Lys
20 25 30

Asp Gly Lys Ala Phe Gly Ser Val Leu Met Ile Ser Ile Asn Gln Leu
35 40 45

Asp Lys Met Thr Gly Thr Asp Ser Asp Cys Pro Asn Asn Glu Pro Asn
50 55 60

Asn Arg Ala Ala Arg Lys Leu Lys Gln Phe Leu Lys Met Asn Ile Ser
65 70 75 80

Leu Val Asn Cys Thr Ser Lys Glu Glu Lys Thr Ile Lys Glu Gln Lys
115 120 125

Lys Asn Asp Pro Cys Phe Leu Lys Arg Leu Leu Arg Glu Ile Lys Thr
130 135 140

Cys Trp Asn Lys Ile Leu Lys Gly Ser Ile
145 150